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23

$\hat{l}=\arg_l\inf\{\|\{\tilde{y}_n\}-G[s(\lambda;l,\hat{a});p_G]\|_q|l\epsilon L\}$

and,

$\hat{l}=\arg_l\inf\{\|\hat{s}(\lambda)-s(\lambda;l,\hat{a})\|_q|l\epsilon L\}$

with L being a set of feasible solutions having the following options: q=2 and $L\subset R^k$; q=∞ and $L\subset R^k$; q=2 and $L\subset R_+^k$; q=∞ and $L\subset R_+^k$.

7. A method of spectral measurement as defined in claim **1** comprising the step of preprocessing the data representative of the first spectrum.

8. A method of spectral measurement as defined in claim **7** wherein the step of preprocessing includes a step of normalising the data representative of the first spectrum.

9. A method of spectral measurement as defined in claim **7** wherein the step of preprocessing includes a step of smoothing the data representative of the first spectrum.

10. A method of spectral measurement as defined in claim **7** wherein the step of preprocessing includes a step of performing baseline correction.

11. A method of spectral measurement as defined in claim **1** wherein the calibration data comprising a mathematical transform of captured spectral data, said mathematical transform for converting the data into an approximation of the ideal spectral data.

12. A method of spectral measurement as defined in claim **1** wherein the calibration data comprises information relating to defects in the spectral transducer.

24

13. A method of spectral measurement as defined in claim **1** wherein the data captured by the spectral transducer includes insufficient information for a specific task and wherein the estimated ideal spectrum includes sufficient information for said task.

14. A method spectral measurement as defined in claim **1** wherein the spectral transducer is a low-resolution spectral transducer.

15. A method of spectral measurement as defined in claim **1** wherein the estimated ideal spectrum has a resolution of at least 5 times the resolution of the spectral transducer.

16. A method of spectral measurement as defined in claim **1** wherein the estimated ideal spectrum has a resolution of at least 10 times the resolution of the first spectral transducer.

17. A method of spectral measurement as defined in claim **1** wherein the step of estimating an ideal spectrum for the second sample using the calibration data, the estimation performed using the determined transformation results in an estimated spectrum, the estimated spectrum corrected for imperfections in the spectral transducer.

18. A method of spectral measurement as defined in claim **17** comprising the step of:

estimating parameters l and a on the basis of an estimate $\hat{s}(\lambda)$ of the second spectrum $s(\lambda;l,a)$.

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